Journal of Marketing and Consumer Research
ISSN 2422-8451 An International Peer-reviewed Journal
Vol.15, 2015
www.iiste.org

Adoption of Mobile Money Transfer Services in Bangladesh: A Structural Equation Modeling Approach

Mr. Iftekhar Mahfuz
Lecturer, School of Business, Independent University, Bangladesh

Mr. Suman Prosad Saha
Lecturer, School of Business, Independent University, Bangladesh

Mr. Mahtab Fahim
Research Assistant, Under CBPR research grant, School of Business, Independent University, Bangladesh

Abstract
In recent years, mobile phones have created a platform to expand commercial transactions in a very easy manner and have created a wide array of business opportunities through the expansion of wireless communication in developing countries. One of such uses is the use of mobile phones in financial services industry. Hence, this research aims to investigate the key factors that influence the Bangladeshi consumers' acceptance and use of mobile money transfer technology using key constructs from the Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI) theory. We analyzed the data using Structured Equation Modeling (SEM) to evaluate the strength of the hypothesized relationships, if any, among the constructs, which include Perceived Ease of Use and Perceived Usefulness, Perceived Trust, Perceived Risk, Perceived Transaction Cost and Trialability as independent variables, and Behavior Intention to Use as the dependent variable. The results provide support of the extended TAM model and confirm its robustness in predicting customers' intention of adoption of MMT. This study contributes to the literature by formulating and validating TAM to predict MMT adoption, and its findings provide useful information for firms in formulating MMT marketing strategies.
Keywords: Technology Acceptance Model, Diffusion Of Innovation, Adoption, Mobile Money Transfer Technology, Structured Equation Modeling.

1. Introduction

The mobile money transfer (MMT) service is an aspect of the broader concept of mobile banking. A wide range of branchless banking business models has evolved or is still in the process of evolution. According to Tobin and Kuwornu, 2011, electronic money will displace paper money and face-to-face transaction. However, this has not been materialized yet. In order for these services to sustain, success is a must. Among the studies carried out on the success of mobile money transfer (Pickens et al. 2009) found that success depends on offering customers a superior service proposition. The success story of mobile money transfer service has so far (like M-PESA in Kenya) attracted low-income population in rural areas and the business model works with the help of agents. The branchless banking is focused into three broad categories: Bank focused, Bank led and non-bank led. The models differ based on the entity, which establishes the relationship with the end customer i.e the bank, Non-bank or Telecommunication Company (Telco).

In Bangladesh, there is an ongoing transformation of mobile money transfer (referred to as "Mobile Money" in this research proposal), by banks and non-bank organizations. Recent mobile money transfers services like bKash (a subsidiary of BRAC Bank), *UCash* (a service of United Commercial Bank) and other mobile network operators or banks' mobile money services is rapidly getting popular among consumers and there has been widespread adoption and diffusion of these services by consumers. Previous studies show that the poor and the unbanked could be successfully offered financial services through mobile technological platform (Hinson, 2011). The initiatives are aimed at bringing financial services to the unbanked, people at the bottom of the economic pyramid as well as making money transfer easy and convenient for all via mobile phones. So far very little research has been done in order to find out factors influencing consumers' acceptance and use of mobile money transfer technology in our country. The paper seeks to establish a model to predict the factors that affect the consumer behavior towards the adoption of Mobile Money Transfer in Bangladesh.

2. Background of the study

M-banking is the provision of banking services using a mobile phone. It is basically a platform for delivery of financial services via the mobile phone. If m-banking extends financial access at sufficient scale to unbanked people, then the retail financial sector of a country is likely to be transformed (Porteous, 2007). Even though mobile money has not been well defined in literature, it can be said to include all efforts aimed at bringing financial services to people by using mobile technology. However, Mobile Money can be defined as money that can be accessed and used via mobile phones (Jenkins, 2008).

The true potential of mobile money lies in the provision of basic financial remittance services to the millions poor people all over the world who previously had no or inadequate access to financial services. With the expansion of mobile phones rapidly in the developing world there is huge opportunity to bank the unbanked population (Ivatury & Pickens, 2006). The advantage of mobile banking is that low-income populations need not to use scarce time and resources to travel to distant bank branches. Since m-banking transaction costs far less to process than other existing systems, banks or Telco's can make a profit handling even small money transfers and payments (BAI, 2004) (Allen, 2003).

3. Literature Review

3.1 Diffusion of innovation Theory (DOI)

Roger's (1995) have classified five characteristics of innovation as perceived by individuals. These characteristics are especially important in influencing an innovation's rate of adoption. These characteristics are illustrated as follows. Relative advantage: is the degree to which an innovation appears superior to existing products, Compatibility: is the degree to which an innovation is perceived as being consistent with existing values, past experiences and needs of potential consumers, Complexity: is the degree to which the innovation is difficult to understand or use, Trialability: is the degree to which an innovation maybe experimented with on a limited basis, Communicability: is the degree to which the results of using an innovation can be observed or described to others (Phillip Kotler, 2010). Probability of adoption is said to be higher if an innovation is more visible. If the results of the innovation could be openly seen and observed, it stimulates discussion, which leads to discussion among friends, family, co-workers or normal users.

In diffusion literature, scholars have addressed research questions as how perceived attributes of an innovation like its relative advantage, compatibility and related factors affect its adoption rate (be it relatively rapidly or at a slow pace).

3.2 Technology Adoption Model (TAM)

TAM is one of the most frequently employed models for research on new information technology acceptance (Davis, 1993). The technology acceptance model as per Davis (1989) describes the consumer's willingness to accept technology. TAM has been extensively applied to user acceptance research of various types of technologies including E-mail, word processor, World Wide Web (WWW), instant messaging (IM), and e-commerce (Gefen et al., 2003). The model is based on five pillars, which are perceived ease of use, perceived usefulness, and attitude toward use, intention to use and actual use. Moreover, the factors contributing to the adoption of mobile services in the background of wireless finance are perceived ease of use, perceived usefulness, perceived cost, system quality and social influence (Kleijnen et al, 2004). In addition, as noted by Wang et al. (2006), in their study of understanding the acceptance of mobile service by individuals, the factors that have a positive influence on behavioral intentions are perceived usefulness, ease of use, credibility, self-efficacy and financial resources. TAM views perceived usefulness and perceived ease of use as the most salient beliefs influence an individual's decision to adopt new technology (Al-Ajam and Nor, 2013).

3.3 Perceived usefulness (PU)

Perceived usefulness is a construct tied to an assessment of the benefits that accrue to an individual or firm by using the technology (Ndubisi and Jantan, 2003). According to Davis (1989), perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance". It has been an instrumental construct in many of the technology adoption models that has been proposed since being first mentioned by Davis. A number of surveys have used perceived usefulness as a construct for different types of technologies and systems, such as mobile payments (Chen, 2008), mobile commerce (Min et al., 2008) and mobile data services in China (Qi et al., 2009). Technology adoption (or usage) decisions have been typically characterized by a strong productivity orientation (Venkatesh and Brown, 2001). Thus, if people find a technology useful, they might be inclined to use the technology. This has also been suggested in a previous study by Luarn and Lin (2005) where they mentioned that "the ultimate reason people exploit MM transfer is that they find them useful.

H1: Higher perceived usefulness will lead to higher behavioral intention to use mobile money.

3.4 Perceived ease of use (PEOU)

A vital concept of many technology adoption models, the construct perceived ease of use is tied to an individual's assessment of the effort involved in the process of using the technology (Ndubisi and Jantan, 2003). Davis (1989) defines "perceived ease of use" as "the degree to which a person believes that using a particular system would be free of the effort". Perceived ease of use has been used in a number of studies as a construct for different type of technological systems, such as mobile data services in China (Qi et al., 2009), electronic commerce (Henderson and Devitt, 2003), and mostly new technologies, (Wang et al., 2008), (Wu and Wang,

2005), (Sun et al. 2009), (Im, et al., 2008). The above-mentioned studies have shown a positive affect by perceived ease of use of the technology on the behavioral intention to use specific technology under study. Also, according to Al-Ajam and Nor (2013), when users find a system to be easy to use, they will have the intention to use the system. Therefore with regard to the behavioral intention to use the mobile services, it is hypothesized that:
H2: Higher perceived ease of use will lead to higher behavioral intention to use MMT

3.5 Perceived Trust (PT)
Trust is defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis & Schoorman, 1995, p. 712). Like every other business transactions, Mobile Money transfer environments require an element of trust. For the purpose of this study, trust is defined as a measure of consumer's level of assurance that the service will be provided with minimum possible hindrance. When it comes to technology or e-commerce, trust is a significant factors that influences consumers' behavior towards adoption and usage (Holsapple and Sasidharab, 2005), (Gefen and Straub, 2003). Previous studies have found perceived trust as a significant determinant influencing consumers' behavior intention towards electronic commerce transactions (Mallat, 2007). Previous research revealed that trust in mobile commerce could be differentiated between two categories: a. Trust in mobile technology and b. Trust in mobile vendors (Siau and Shen, 2003). Users expect privacy from mobile vendors in the community. In the mobile environment, since the openness adds more risks, people would have higher demand for privacy protection. The overall network and perceived reliability of service affect consumer's perceived trust in the service. Consumers need to have a belief that the network is reliable. Therefore, perceived trust and reliability are expected to have a direct effect on behavioral intention.
H3: Higher perceived trust will lead to a higher behavioral intention to use mobile money.

3.6 Perceived Risk (PR)
Perceived Risk is defined as a consumer's belief about the potential uncertain negative outcomes from the mobile money transaction. Consumers' desire to minimize risk supersedes their willingness to maximize utility and thus their subjective risk perception strongly determines their behavior (Bauer et al., 2005). Also it is found out that consumer behavior is strongly influenced by perception of risk; consumers are usually uncertain about the consequences of a decision or an action [Bauer 1976]. From prior studies it has been revealed that consumers try to minimize risk rather than maximize utility. A consumer's subjective risk perception can thus strongly determine his behavior [Mitchell 1999].

As consumers adopt innovations, they lack experience with the new product and often find themselves in a situation of high risk since the risk. This is also true for the adoption of mobile money transfer since users of such services have concerns about manipulation of data, unauthorized access to data, and unwanted tracking of usage patterns. On top of these, there is also a concern regarding consumers' privacy. The use of mobile medium by marketers has made it possible for them to reach consumers anytime and anywhere. Although this adds to the benefit of having a high-potential, personalized mobile marketing, it also adds to the fear of privacy violation on consumers' side. Consumers therefore try to reduce the risk associated with a certain behavioral decision, which in this case is the behavioral decision to adopt mobile money transfer. Thus, reducing the risk factors can mean that the consumers will be more inclined to use mobile money transfer or similar services. This has been revealed in a study where reducing uncertainty has been found to have a positive influence on consumers' intention to adopt electronic transactional systems (Chen, 2008).
H4: Higher the perceived risk will lead to a negative influence on behavioral intention to use mobile money.

3.7 Transactional cost (TC)
TC includes transaction price, registration fee, or cost of a new device if one is needed to use the service (Tobbin and Kuwornu, 2011). Responses collected from the survey confirmed that transactional cost influences their behavioral intention to use the MM transfer services.
H5: Higher transactional cost will lead to a negative influence on behavioral intention to use mobile money transfer services.

3.9 Trialability
The degree to which the innovation may be tried on a limited basis before making an adoption (or rejection) decision (Phillip Kotler, 2010). Thus, the behavioral intention to adopt MM transfer will likely to increase if the technology is allowed to be demonstrated to the user at free of cost or consumers can use the technology free-at-first-use. Researchers have argued in past that early adopters of an innovation perceive trialability as more important factor than do later adopters. Also more innovative individuals have no precedent to follow when they

adopt, whereas later adopters are surrounded by others who have already adopted the innovation (Tobbin and Kuwornu, 2011). Moreover, our initial customer interviews have indicated that the users of MM transfer will adopt the service if they are given free trials.

H6: The greater the trialability of mobile money transfer service, the higher the influence on users' behavioral intention for it.

4. Theoretical Framework

The hypothesis is formulated based on the literature review to build a conceptual model for the research.

The following variables were included in the model: determinants of TAM, (Perceived Usefulness, Perceived Ease of Use), Perceived Risk, DOI theory constructs (Trialability and Relative Advantage, RA), Perceived Risk and Transactional cost. Reliability is identified as antecedent of Perceived Trust.

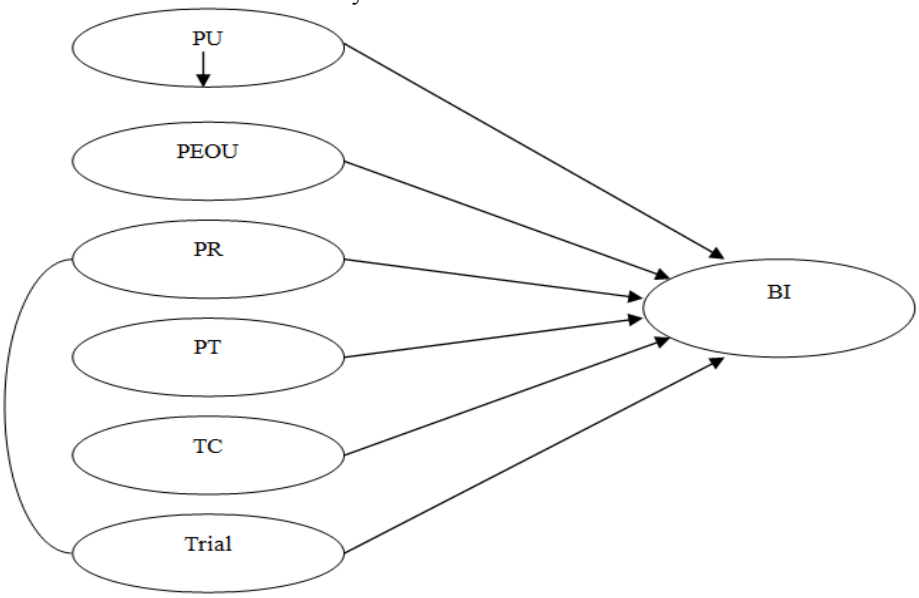


Figure 1: Research Model Framework

5. Research Methodology

5.1 Research objective/ purpose of the study

The aim of this paper is to investigate the key factors that influence Bangladeshi consumer's use of mobile money transfer service/technology (like bKash, *UCash*) using key ideas from Davies' (1989) Technology Acceptance Model (TAM), Diffusion of Innovation theory (DOI) by Rogers and Behavioral intention theory to form initial hypothesis. The data will be analyzed using a Structural Equation Modeling (SEM).

Since the research will look into behavioral intention of the user to adopt MMT in a real life setting, based on the constituents of the Technology Acceptance Model and Innovation of Diffusion model, the research will take Pragmatism as its alternative knowledge claim position. The reason behind taking this position is that the research will look into a real life adoption of a solution to a problem and so will not attempt to come up with singular unified model, but will look into the effectiveness of the solution, which will require the research method to be a bit more flexible (Creswell, 2013). Among the alternative strategies to inquiry, the research will be carried through using the mixed methods, where a mix of sequential and concurrent procedures will be used. The initial stage will involve interviewing experts in MMT implementation in the context and obtaining information to test the model variables (PU, PEOU, PR, PT, TC and Trial). The second stage will involve collection of data through surveys from users in order to form a statistically significant quantitative relationship among these variables and the behavioral intention for the adoption of MMT. For this stage, the research will implement preliminary directional relationship tools such as correlation and then use the Structural Equation Model in order to filter and determine the model variables which best explains the MMT adoption intention (Peck, Olsen and Devore, 2011).

The study will aim to predict the consumer behavior and intention to adopt Mobile Money Transfer service in Bangladesh (Dhaka) by extending TAM and DOI models with additional constructs. A survey will be developed for data collection. The survey will be conducted in Dhaka, Bangladesh. The data from the survey will be tested using Structured Equation Model. The unit of analysis will be prospective individual customer of mobile money transfer service. In developing the model extensive literature was reviewed. Also, professionals working in mobile money transfer/service providers and companies will be interviewed alongside a selection of consumers. Based on the results of the interviews a survey questionnaire will be developed using a multiple-item,

five point likert scale approach. The items in the survey will be also developed by adapting existing measures validated by other researchers in mobile banking and mobile payment environment. In addition, by converting the definition of a construct into a questionnaire format survey items will be made.

The survey questionnaire consisted of 7 variables which construct a total of 25 items ranging between 3 to 5 items per variable. The questionnaire also has some classification questions which were aimed at gathering information about respondent, including gender, age and profession.

5.2 Data Collection

Data was collected using a self administered questionnaire to the general public at streets and other places. In total, 300 respondents were approached in the survey and 251 responses were collected and used for analysis. Since domestic money transfer is generally seen a one way transaction from the urban cities to the rural areas, responses were collected from Dhaka city only. However, respondents were not distinguished by where they filled in the questionnaire. The questionnaires were distributed by personally approaching the respondents on the streets, outlets providing mobile money transfer service etc. and requested to participate in a social research involving mobile money transfer. The questionnaire has been prepared in both Bengali (Native Language) and English for the convenience of the respondents.

6. Findings

6.1 Descriptive Statistics

A total of 251 respondents were used in the analysis and 83.3% (209 participants) comprised of male respondents and 16.7% (42 participants) comprised of female respondents. Of the respondents who participated in the survey, 97 respondents (73 male, 24 female) were in the age range of 15 to 25 years; 88 respondents (74 male, 14 female) were in the age range of 26 to 35 years; 45 respondents (41 male, 4 female) were in the age range of 36 to 45 years; and 21 male respondents were above 46 years.

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15 to 25	97	38.6	38.6	38.6
	26 to 35	88	35.1	35.1	73.7
	36 to 45	45	17.9	17.9	91.6
	46 and above	21	8.4	8.4	100.0
	Total	251	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	209	83.3	83.3	83.3
	Female	42	16.7	16.7	100.0
	Total	251	100.0	100.0	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Age * Gender	251	100.0%	0	0.0%	251	100.0%

Age * Gender Crosstabulation

Count

		Gender		Total
		Male	Female	
Age	15 to 25	73	24	97
	26 to 35	74	14	88
	36 to 45	41	4	45
	46 and above	21	0	21
Total		209	42	251

6.2 Reliability and Validity Analysis

We used SPSS version 20 to test the reliability of the multiple item constructs that were included in the survey instrument, since it is the most popular measure of internal consistency. In social science research a reliability coefficient of 0.6 or higher is considered "acceptable" (Nunnelly, 1978), (George and Mallery, 2003), (Kline, 2000). Therefore, all constructs except Perceived Risk and Transaction Cost met the reliability test. The Cronbach's Alpha value for Perceived Usefulness was 0.67; Perceived Ease of Use was 0.65, 0.71 for Perceived Trust, and 0.65 for Trialability.

Perceived Risk and Transaction Cost were removed from the model and were not used for further analysis.

Scale: BI

Case Processing Summary

		N	%
Cases	Valid	251	100.0
	Excluded[a]	0	.0
	Total	251	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.643	2

Scale: PU

Reliability Statistics

Cronbach's Alpha	N of Items
.670	3

Scale: PEOU

Reliability Statistics

Cronbach's Alpha	N of Items
.653	5

Scale: PT

Reliability Statistics

Cronbach's Alpha	N of Items
.707	5

Scale: Trialability

Reliability Statistics

Cronbach's Alpha	N of Items
.648	3

6.3 Factor Analysis

The data was subjected to exploratory factor analysis to establish convergent and discriminate validity of the proposed MMT model using principal component analysis (PCA) as the extraction method and varimax rotation with Kaiser Normalization as the rotation method. To begin with a 7 factor analysis was conducted and the result showed 7 orthogonal factors with eigenvalues above 1. (See Appendix)

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was found to be **0.754**. Therefore the application of factor analysis was deemed appropriate.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.754
Bartlett's Test of Sphericity	Approx. Chi-Square	444.084
	df	21
	Sig.	.000

6.4 Fit Indices

We used SPSS Amos 18 to generate the common model-fit indices. The use of structural modeling helps evaluate whether the data fit a theoretical model. The following model fit measures were used to estimate the measurement model fit, the comparative fit index (CFI), root mean square error of approximation (RMSEA), the normed fit index (NFI), Incremental Fit Index (IFI), and the Tucker Lewis coefficient (TLI). According to Gerbing and Anderson (1992), the criteria for an acceptable model are as follows: RMSEA of .08 or lower, CFI of .90 or higher; NFI of .90 or higher. In addition, the fit between the data and the proposed measurement model can be tested through a chi-square goodness-to-fit (GFI) test where the probability is greater than or equal to 0.9 indicates a good fit (Hu and Bentler, 1999). The GFI of this study is .577, RMSEA= .365, NFI= 0, CFI= 0, IFI= 0, TLI= 0, which implies that the model is a perfect fit according to Tanaka (1993) and Maruyama (1998).

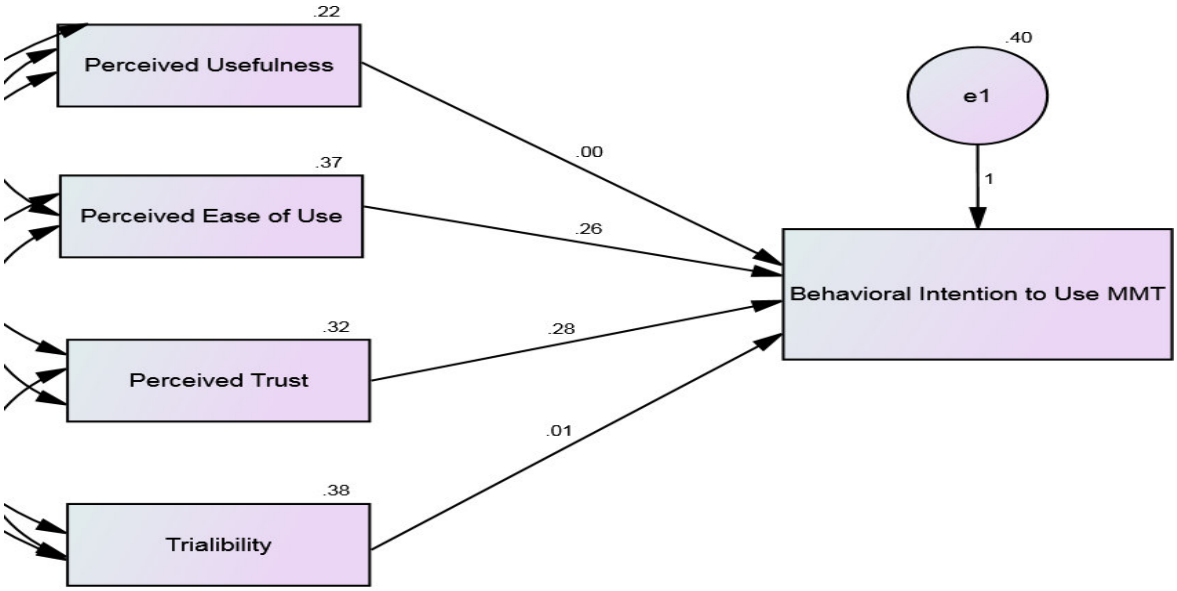
6.5 Hypothesis Analysis

The estimated path coefficients of the structural model was evaluated to test the hypothesis formed earlier once we found satisfactory fit of the model above (see table). We reduced the number of hypothesis to 6 after reliability test, thus eliminating perceived risk and transaction cost. The results are shown in the path diagram by using Amos 18.

			Estimate	S.E.	C.R.	P	Label
BI	<---	PU	-.002	.102	-.019	.985	par_1
BI	<---	PEOU	.258	.086	3.005	.003	par_2
BI	<---	PT	.282	.097	2.910	.004	par_3
BI	<---	Trialability	.008	.080	.095	.925	par_4

S.E is an estimate of the standard error of the covariance. C.R is the critical ratio obtained by dividing the covariance estimate by its standard error. No significant relationship was found between perceived usefulness and behavioral intention to use mobile money transfer, for H1 (-.002 p>0.01). In support of H2, we found a significant and positive relationship between perceived ease of use and behavioral intention to use mobile money transfer (.258 p<0.01). The relationship proposed in H3, is also confirmed (.282 p<0.01). There is no significant relationship between trialability and behavioral intention to use mobile money transfer (.008 p>0.01).

It must be noted here that the original TAM relationship between perceived usefulness and behavioral intention adopt new technology is not found as per the findings of our study. This could be mainly due to very high correlations of the independent variable, perceived usefulness, with other variables of the study. This finding is contrary to the results of earlier studies where it was found that perceived usefulness significantly influences behavioral intention.



7. Discussion and Conclusion

The study aimed to predict the factors behind the intention to adopt and use mobile money transfer service by the people living in Dhaka, Bangladesh. A questionnaire survey was conducted based on relevant adoption research and theories. We included items for Perceived Usefulness, Perceived ease of Use, Perceived Risk, Perceived

Trust, Trialability and Transactional cost. However, since Perceived Risk and Transaction Cost did not pass the validity and reliability test we excluded them from the model.

This study used structural equation modeling with AMOS 18, which led us to findings that partially supported the results of previous extended TAM research (e.g., Wang and Benbasat, 2005) with perceived ease of use (β= .26), and perceived trust (β= .28) as key determinants of behavioral intention. The results also show that Perceived Usefulness (β= -.002) and Trialability (β= .008) has no significant relationship with behavioral intention to use mobile money. We were expecting to find a significant and positive relationship between Perceived Usefulness and behavioral intention to use mobile money transfer services. However, our findings did not support this hypothesis which was the foundation of Technology adoption model previously. The reason behind this result could be multicollinearity.

In Bangladesh, bKash and Ukash were very commonly used services of mobile money transfer. A mobile money transfer service is useful for those people without access to formal financial services. Hence, it is mostly helping the unbanked population. The ease of use of the service is a significant factor for the adoption and use of mobile money transfer service in Dhaka, Bangladesh.

In conclusion, the study partially supports technology adoption model, Perceived trust and Perceived ease of use were found to be the most significant determinants of the behavioral intention to use mobile money transfer in Bangladesh. The adoption of mobile money transfer is dependent on the consumers' perception on trust and ease of use. In addition, further research could focus on the effect of relative advantage, reliability and perceived risk on behavioral intention to use mobile money transfer services.

References

1. Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision sciences*, *28*(3), 557-582.
2. Al-Ajam, A. S., & Nor, K. M. (2013). Influencing factors on behavioral intention to adopt Internet banking service. *World Applied Sciences Journal*, *22*(11), 1652-1656.
3. Allen, B. (2003). *Processing Cost per transaction.* New York: New York.
4. BAI (2004). *Transaction Cost per Distribution Channel.* Chicago: BAI.
5. Bauer, A., "Konsumentenentscheidungen als Risikoverhalten", *Marketing-Soziologie,* Karl-Gustav Specht and Günther Wiswede (eds.), Duncker Humblot, Berlin, pp. 207-217, 1976.
6. Bauer, H. H., Barnes, S. J., Reichardt, T., and Neumann, M. M. (2005). Driving consumer acceptance of mobile marketing a theoretical framework and empirical study. *Journal of Electronic Commerce Research,* 6(3), 181 - 192.
7. Chen, H. (2008). Individual Mobile Communications Services and Tariffs. *Daqing, Heilongjiang,* China.
8. Chen, L. D. (2008). A model of consumer acceptance of mobile payment. *International Journal of Mobile Communications*, *6*(1), 32-52.
9. Creswell, J. W. (2013). Research design: A qualitative, quantitative, and mixed method approaches. Sage.
10. Davis, F. D. (1989). Perceived Usefulness, perceived ease of use and user acceptance of information technology. *MIS Quaterly* , 318-339.
11. Davis, F.D., User acceptance of information technology: system characteristics, user perceptions and behavioral impacts, *Int. J. Man-Machine Studies, Vol. 38, 1993*, pp. 475-487.
12. Gefen, D., & Straub, D. W. (2003). Managing user trust in B2C e-services. *E-service Journal*, *2*(2), 7-24.
13. Gefen, D., Karahanna, E., and Straub, T, Trust and TAM in online shopping: An integrated model, *MIS Quarterly, Vol. 27, 2003*, pp. 51-90.
14. George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.). Boston: Allyn & Bacon.
15. Henderson, R., & Divett, M. J. (2003). Perceived usefulness, ease of use and electronic supermarket use. *International Journal of Human-Computer Studies*,*59*(3), 383-395.
16. Holsapple, C. W., & Sasidharan, S. (2005). The dynamics of trust in B2C e-commerce: a research model and agenda. *Information Systems and E-Business Management*, *3*(4), 377-403.
17. Im, I., Kim, Y., & Han, H. J. (2008). The effects of perceived risk and technology type on users' acceptance of technologies. *Information & Management*, *45*(1), 1-9.
18. Ivatury, G., & Pickens, M. (2006). *Mobile Phone Banking and Low-Income Customers: Evidence from South Africa.* CGAP, United Nations Foundation.
19. Jenkins, B. (2008). Developing mobile money ecosystems. *Washington, DC: International Finance Corporation and Harvard Kennedy School*.
20. Kleijnen, M., Wetzels, M., & Ruyter, K. D. (2004). Consumer acceptance of wireless finance. *Journal of Financial Services Marketing* , 206.
21. Kline, P. (2000). The handbook of psychological testing (2nd ed.). London: Routledge, page 13.
22. Luarn, P., Lin, H.-H. (2005). Toward an understanding of the behavioral intention to use mobile banking.

Computers in Human Behavior, 21, 873-91.
23. Mallat, N. (2007). Exploring consumer adoption of mobile payments – A qualitative study. Journal of Strategic Information Systems , 16 (4), 413–432.
24. Maruyama, G. M. (1998). History and logic of structural equation modeling. In *Basics of structural equation modeling.* (pp. 15-27). Thousand Oaks, CA: SAGE Publications, Inc. doi: http://dx.doi.org/10.4135/9781483345109.n2
25. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of management review*, *20*(3), 709-734.
26. Min, Q., Ji, S., & Qu, G. (2008). Mobile commerce user acceptance study in China: a revised UTAUT model. *Tsinghua Science & Technology*, *13*(3), 257-264.
27. Mitchell, V.-W., "Consumer Perceived Risk: Conceptualisations and Models", *Journal of Marketing*, Vol.33, No. 1:163-196, 1999.
28. Nunnally, J. C. (1978). Assessment of Reliability. In: Psychometric Theory (2nd ed.). New York: McGraw-Hill.
29. Oly Ndubisi, N., & Jantan, M. (2003). Evaluating IS usage in Malaysian small and medium-sized firms using the technology acceptance model. *Logistics Information Management*, *16*(6), 440-450.
30. Peck, R., Olsen, C., & Devore, J. (2011). Introduction to statistics and data analysis. Cengage Learning.
31. Kotler, Philip, et al. *Principle of Marketing*. Frenchs Forest: Pearson Education Australia, 2008. Print
32. Porteous, D. (2007). *Just how transformational is M-Banking?* FinMark Trust
33. Qi, J., Li, L., Li, Y., & Shu, H. (2009). An extension of technology acceptance model: analysis of the adoption of mobile data services in China. *Systems Research and Behavioral Science*, *26*(3), 391-407.
34. Rogers, E. M. (1995). *Diffusion of Innovations.* New York: The Free Press.
35. Schoorman, F. David, Roger C. Mayer, and James H. Davis. "An integrative model of organizational trust: Past, present, and future." *Academy of Management review* 32.2 (2007): 344-354.
36. Siau, K., Lim, E. P., & Shen, Z. (2001). Mobile commerce: Promises, challenges and research agenda. *Journal of Database Management (JDM)*,*12*(3), 4-13.
37. Sun, Q., Wang, C., & Cao, H. (2009, June). An extended TAM for analyzing adoption behavior of mobile commerce. In *Mobile Business, 2009. ICMB 2009. Eighth International Conference on* (pp. 52-56). IEEE.
38. Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. In K. A. Bollen & J. S. Long (Eds.), Testing structural equation models (pp. 10−40). Newbury Park, CA: Sage.
39. Venkatesh, V., & Brown, S. A. (2001). A longitudinal investigation of personal computers in homes: adoption determinants and emerging challenges. *MIS quarterly*, 71-102.
40. Wang, YiShun, HsinHui Lin, and Pin Luarn. "Predicting consumer intention to use mobile service." *Information Systems Journal* 16.2 (2006): 157-179.

Appendix

Rotated Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
The service can be used conveniently alongside my other daily activities.	.254	-.027	.009	-.057	.727	-.055	.041
You believe that the MMT service is a better way to undertake money transfer transaction.	.527	.012	.040	-.060	.506	-.187	.015
I think using MMT service is a good way to satisfy my need to perform such tasks.	.093	.218	.188	.040	.748	-.136	.075
I believe the use of MMT service is hassle free.	.465	.257	.489	.155	.230	-.258	.008
The registration procedure is quick and simple.	.250	.617	.052	.315	.001	-.080	-.118
The steps in the payment procedure are minimum and easy.	.155	.662	.168	.272	.081	-.171	.224
The MMT agents are easily available.	.178	-.033	.572	-.073	.428	-.050	-.211
I can use the MMT service from my basic handset.	.037	.685	-.119	-.208	.070	-.202	-.105
I trust the MMT technology platform provided by the company.	.702	.139	.107	.108	.220	-.098	-.213
The service agents are reliable.	.692	.127	.037	-.061	.150	-.044	.055
The service agents are from my community and familiar to me.	.401	.235	.460	-.019	.361	-.082	-.095
The information regarding the transaction is kept private by the agent.	.741	.196	.196	.014	.133	-.236	.148
I can always complete MMT transaction successfully.	-.093	.148	.517	.457	.143	.228	-.083
I believe there is some chance that the intended receiver will not receive my money.	-.142	-.167	-.183	-.010	-.113	.763	.130
The reputation of the service provider reduces my perceived risk about the service.	-.202	-.161	-.012	.049	-.190	.831	.015
I believe there is a possibility of sending the money in the wrong receiver's account (giving the wrong phone number).	.139	.029	.056	-.695	.092	.272	-.101
The registration fee to use the MMT service is reasonable.	.131	.098	.025	.766	.029	.268	.132
The charge of transferring money is low.	.226	-.082	.020	.455	-.121	.053	.610
The total cost of using the service influences my decision to use MMT.	-.090	.059	.021	.042	.127	.086	.795
My intention to use the service will increase if the process is first demonstrated to me.	.389	.445	.301	-.250	.028	.272	.017
If given free trials, the chances are higher for me to adopt the service.	.435	.356	.209	-.429	.064	.032	.030
If I see others using the service, it is more likely that I will use the service too.	.065	.527	.455	-.141	.147	-.063	.213
I prefer using MMT services than other forms of money transfer services.	.546	-.102	.541	-.001	.013	-.062	.070
Compared to other money transfer services, MMT is simple to use.	.204	.095	.632	-.085	-.146	-.330	.321

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 16 iterations.

Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
The service can be used conveniently alongside my other daily activities.	.449	-.146	.094	-.387	.209	.011	.421
You believe that the MMT service is a better way to undertake money transfer transaction.	.604	-.153	.039	-.344	.015	.172	.194
I think using MMT service is a good way to satisfy my need to perform such tasks.	.559	-.008	-.041	-.198	.313	-.189	.436
I believe the use of MMT service is hassle free.	.780	.147	-.029	-.060	.000	-.101	-.143
The registration procedure is quick and simple.	.447	.259	-.224	.306	.284	.238	-.132
The steps in the payment procedure are minimum and easy.	.529	.378	-.249	.373	.099	.048	.117
The MMT agents are easily available.	.529	-.145	.209	-.225	.199	-.388	-.100
I can use the MMT service from my basic handset.	.330	-.219	-.328	.490	.196	.153	.135
I trust the MMT technology platform provided by the company.	.651	-.045	.067	-.210	.094	.341	-.198
The service agents are reliable.	.579	-.058	.155	-.095	-.135	.370	-.014
The service agents are from my community and familiar to me.	.716	-.041	.135	-.051	.142	-.126	-.056
The information regarding the transaction is kept private by the agent.	.761	.048	.030	-.082	-.242	.266	-.052
I can always complete MMT transaction successfully.	.218	.462	.184	.014	.377	-.339	-.185
I believe there is some chance that the intended receiver will not receive my money.	-.493	.150	.599	.114	.112	.164	.130
The reputation of the service provider reduces my perceived risk about the service.	-.505	.198	.660	.161	.194	.041	-.043
I believe there is a possibility of sending the money in the wrong receiver's account (giving the wrong phone number).	.089	-.594	.428	.204	-.047	.008	.105
The registration fee to use the MMT service is reasonable.	.066	.755	.085	-.114	.257	.197	-.066
The charge of transferring money is low.	.077	.675	.087	-.098	-.364	.153	.141
The total cost of using the service influences my decision to use MMT.	.033	.407	.127	.120	-.346	-.108	.584
My intention to use the service will increase if the process is first demonstrated to me.	.503	-.086	.372	.406	.047	.097	-.040
If given free trials, the chances are higher for me to adopt the service.	.537	-.299	.222	.309	-.116	.110	.023
If I see others using the service, it is more likely that I will use the service too.	.547	.067	.036	.422	.005	-.275	.142
I prefer using MMT services than other forms of money transfer services.	.575	.075	.293	-.162	-.270	-.099	-.280
Compared to other money transfer services, MMT is simple to use.	.508	.141	-.007	.144	-.467	-.389	-.153

Extraction Method: Principal Component Analysis.

a. 7 components extracted.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar